

ABSTRACT OF THE DISCLOSURE

The susceptibility of human macrophages to human immunodeficiency virus (HIV) infection depends on cell surface expression of the human CD4 molecule and CC cytokine receptor 5. CCR5 is a member of the 7-transmembrane segment superfamily of G-protein-coupled cell surface molecules. CCR5 plays an essential role in the membrane fusion step of infection by some HIV isolates. The establishment of stable, nonhuman cell lines and transgenic mammals having cells that coexpress human CD4 and CCR5 provides valuable tools for the continuing research of HIV infection. In addition, antibodies which bind to CCR5, CCR5 variants, and CCR5-binding agents, capable of blocking membrane fusion between HIV and target cells represent potential anti-HIV therapeutics for macrophage-tropic strains of HIV.

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